Amendments to the Claims

1. (**Currently Amended**)   A computerized design parameter managing method for managing design parameters used respectively in a ~~plurality of different~~ two-dimensional CAD system and a three-dimensional CAD system ~~systems~~, comprising:

performing computerized separation of two-dimensional CAD data and three-dimensional CAD data used, respectively, which has been inputted in the ~~plurality of~~ two dimensional CAD ~~systems~~ system and the three-dimensional CAD system into geometrical information and attribute information;

performing computerized setting up of arbitrary design parameters, by an inputting means for inputting direction of a designer, independently among design parameters used respectively in the ~~plurality of different~~two-dimensional CAD system and the three-dimensional CAD ~~systems~~ system into shared design parameters and non-shared design parameters, and providing the shared design parameters in a virtually shared state among the ~~plurality of different~~ two-dimensional CAD system and the three-dimensional CAD ~~systems~~ system;

performing computerized correlation of the separated attribute information with the shared design parameters set up into the virtually shared state;

preparing an attribute correlation table, which correlates attribute information of shared design parameters of the two-dimensional CAD system and the attribute information of the three-dimensional CAD system through design parameters, regarding to the attribute information which is correlating the design parameter with a virtually shared state in the two-dimensional CAD data and the three-dimensional CAD data;

performing computerized accessing and recognizing of the separated attribute information correlated with the shared design parameters set up into the virtually shared state among two-dimensional CAD data and the three-dimensional CAD data used respectively in the ~~respective~~ two-dimensional CAD system and the three-dimensional CAD ~~systems~~ system;

performing, in a co-design mode, computerized management of geometrical information of the shared design parameters set up into the virtually shared state which are correlated with the accessed and recognized separated attribute information as objects with data compatibility in the

plurality of different two-dimensional CAD system and the three-dimensional CAD systems system;

separately and independently performing management of geometrical information of the non-shared design parameters other than that of the parameters set up into the virtually shared state which are not correlated with the accessed and recognized attribute information from the geometrical information which is performed to manage as objects without with data compatibility in the plurality of different CAD systems in the two-dimensional CAD system and the three-dimensional CAD system;

retrieving existing attribute data in the attribute correlation table, recognizing geometrical information of the shared parameters correlated to the retrieved attribute data, and managing the geometrical information as an object of a cooperation design mode, wherein a relevancy between the geometrical information being an object of the attribute information and the attribute information is maintained separately; and

performing bundling of the geometrical information of the two-dimensional CAD data in a virtually shared state and the geometrical information of the three-dimensional CAD data in a virtually shared state through design parameters based on the attribute correlation table,

wherein three dimensional CAD data and two-dimensional CAD data are bundled for use in the two-dimensional CAD system and in the three-dimensional CAD systems;

converting mutually the geometrical information between the two-dimensional space and the three-dimensional space and in order to interchange data between the two-dimensional CAD system and the three-dimensional CAD system which differ in geometrical dimensions in Euclidean space; and

displaying the geometrical information of the three-dimensional CAD data and information of the two-dimensional CAD data simultaneously on one display for use in development of a product.

2. (**Currently Amended**) A computerized design parameter managing system for managing design parameters used respectively in a plurality of different two-dimensional CAD system and a three-dimensional CAD systems system, comprising:

a computerized system component for separating two-dimensional CAD data and three-dimensional CAD data which has been inputted to the system, ~~used~~ respectively, in the ~~plurality of~~ ~~different~~two-dimensional CAD system and the three-dimensional CAD ~~systems~~ system into geometrical information and attribute information;

a computerized system component for setting up arbitrary design parameters, by an inputting means for inputting direction of a designer, independently among the design parameters used respectively in the ~~plurality of~~ two-dimensional ~~different~~ CAD ~~systems~~ system and the three-dimensional CAD system into shared design parameters and non-shared design parameters, and for providing the shared design parameters in a virtually shared state among the ~~plurality of different~~ two-dimensional CAD ~~systems~~ system and the three-dimensional CAD system;

a computerized system component for correlating the separated attribute data with the shared design parameters set up into the virtually shared state;

a computerized system component for preparing an attribute correlation table, which correlates attribute information of shared design parameters of the two-dimensional CAD system and the attribute information of the three-dimensional CAD system through design parameters, regarding to the attribute information which is correlating the design parameter with a virtually shared state in the two-dimensional CAD system and the three-dimensional CAD system;

a computerized system component for accessing and recognizing the separated attribute data correlated with the shared design parameters set up into the virtually shared state among the CAD data used respectively in the ~~plurality of different~~ two-dimensional CAD system and the three-dimensional CAD ~~systems~~ system;

a computerized system component for managing, in a co-design mode, geometrical information of the shared design parameters set up into the virtually shared state which are correlated with the accessed and recognized separated attribute data as objects with data compatibility in the ~~plurality of different~~ two dimensional CAD system and the three-dimensional CAD ~~systems~~system; ~~and~~

a computerized system ~~component   for~~component for separately and independently managing geometrical information ~~that~~ of the non-shared design parameters ~~set up into the virtually~~ ~~shared state~~ which are not correlated with the separated attribute information from the geometrical

information as objects ~~without~~ with data compatibility ~~in the plurality of different CAD systems~~ :
~~and~~

a computerized system component for retrieving existing attribute data in the attribute correlation table, recognizing geometrical information of the shared parameters correlated to the retrieved attribute data, and managing the geometrical information as an object of a cooperation design mode, wherein a relevancy between the geometrical information being an object of the attribute information and the attribute information is maintained separately;

a computerized system component for performing bundling of the geometrical information of the two-dimensional CAD data in a virtually shared state and the geometrical information of the three-dimensional CAD data in a virtually shared state through design parameters based on the attribute correlation table,

wherein three dimensional CAD data and two-dimensional CAD data are bundled for use in the two-dimensional CAD system and in the three-dimensional CAD systems;

a computerized system component for converting mutually the geometrical information between the two-dimensional space and the three-dimensional space and in order to interchange data between the two-dimensional CAD system and the three-dimensional CAD system which differ in geometrical dimensions in Euclidean space; and

a display for displaying ~~the geometrical~~ information of the three-dimensional CAD data and information of the two-dimensional CAD data simultaneously on one display for use in development of a product.

3. (Previously Presented)   The computerized design parameter managing system as claimed in claim 2, further comprising:

a computerized registration component for registering arbitrary design parameters among the design parameters used respectively in the plurality of different CAD systems as the shared parameters among the plurality of different CAD systems to a database;

a computerized history managing component for managing a history between the design parameters used respectively in the plurality of different CAD systems and the shared parameters registered to the database by means of the registration means; and

a computerized finite difference managing component for managing the finite differences between the design parameters used respectively in the plurality of different CAD systems and the shared parameters registered to the database by the registration means based on the history managed by the history managing means.

4. (**Currently Amended**)   The computerized design parameter managing system as claimed in claim 3, further comprising:

a computerized notification component for notifying the <u>plurality of different CAD systems of the</u> finite differences managed by the finite difference managing means ~~to the plurality of different CAD systems~~.

5. (Previously Presented)   The computerized design parameter managing system as claimed in claim 2, further comprising:

a computerized preparation component adapted to prepare three-dimensional data in a condition where logical electric design information has been correlated to physical three-dimensional configuration information.

6. (Previously Presented)   The computerized design parameter managing system as claimed in claim 2, further comprising:

a computerized component for preparing and managing an electronic parts data library which has been modeled in a three-dimensional configuration; and

wherein the three-dimensional electronic parts data library are arranged so as to have parts origin information and material physical property information and so as to correlate the parts origin information and the material physical property information with the shared parameters set up in the virtually shared state.

7. (Previously Presented)   A computer program embodied in or on a computerized readable medium for executing the design parameter managing method as claimed in claim 1 with respect to a computer.

8. (Previously Presented)   A computerized design parameter managing system as claimed in any one of claims 2, 3, 4, 5 and 6, further comprising a computer program embodied in or on a computerized readable medium programmed for use in the design parameter managing system.

9. (Canceled)